Patent Claims

1. A method for monitoring a rotation rate sensor with a vibrational gyroscope
   - which has a first input and a first output which form part of a primary control loop which excites the vibrational gyroscope by supplying an excitation signal to the first input at its natural frequency,
   - where the vibrational gyroscope also has a second input and a second output which form part of a secondary control loop,
   - where an output signal can be taken from the second output, said output signal being amplified and subjected to analog/digital conversion and then demodulated into an inphase component and a quadrature component,
   - where the components are filtered and are then modulated again and compiled to form a driver signal which is supplied to the second input, and
   - where a rotation rate signal is derived from the inphase component,

   characterized
   - in that the inphase component and the quadrature component have a test signal added to them whose frequency brings about sidebands which are situated in the driver signal outside of the second control loop's passband,
   - in that the respective test signal which is present in the inphase component and in the quadrature component after passing through the control loop is monitored, and
   - in that an error message is output if the amplitude is below a prescribed threshold value.

2. The method as claimed in claim 1, characterized in that measurement signals are taken from the

components prior to the addition of the test signal and are synchronously demodulated.

3. The method as claimed in claim 2, characterized in that the measurement signals from both components are respectively monitored for their amplitude, for the ratio of the amplitudes and/or for their phase.

4. The method as claimed in either of claims 2 and 3, characterized in that measurement signals are derived before and after the components are filtered.

5 The method as claimed in one of claims 2 to 4, characterized in that the synchronously demodulated measurement signals are integrated over a prescribed time, and in that the value of the integral is compared with the prescribed threshold value.

6. The method as claimed in one of claims 2 to 4, characterized in that the synchronously demodulated measurement signals are integrated, and in that the time before the integrated measurement signals reach a prescribed threshold value is measured.

7. The method as claimed in one of the preceding claims, characterized in that the modulation signal has a frequency of 200 Hz.